



IOWA DEPARTMENT OF NATURAL RESOURCES

LEADING IOWANS IN CARING FOR OUR NATURAL RESOURCES

Iowa Stream Mitigation Method

Urban Sites Tour

June 16, 2016





Site #1: Unitarian Church Site – Thomas Beck Road

BEFORE



AFTER



BEFORE



BEFORE



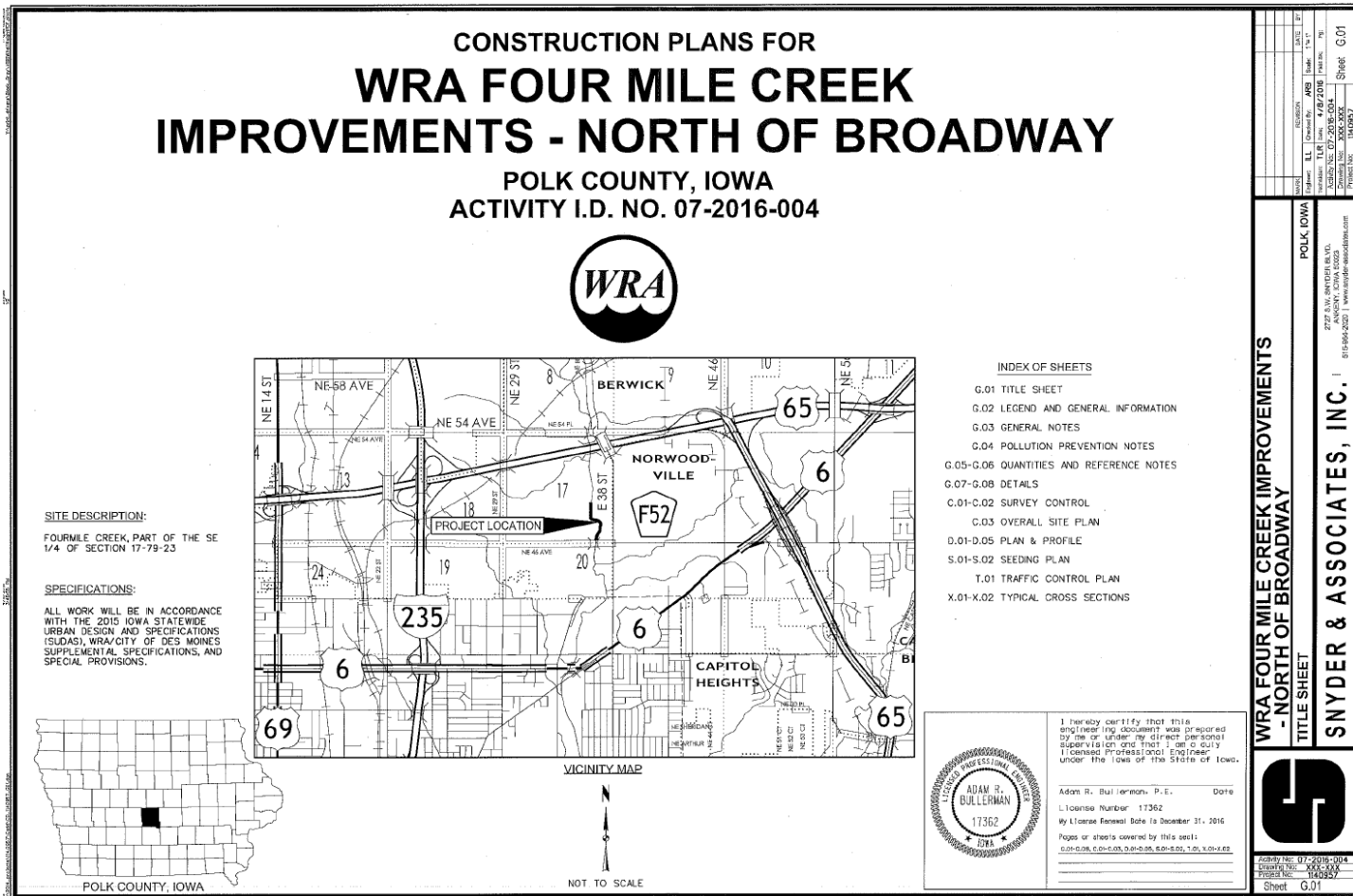
BEFORE



AFTER



Site #2: Four Mile Creek – NE Broadway





IOWA DEPARTMENT OF NATURAL RESOURCES

CHUCK GIPP, DIRECTOR







Site #3: Four Mile Creek – Copper Creek



Prior to stabilization work.

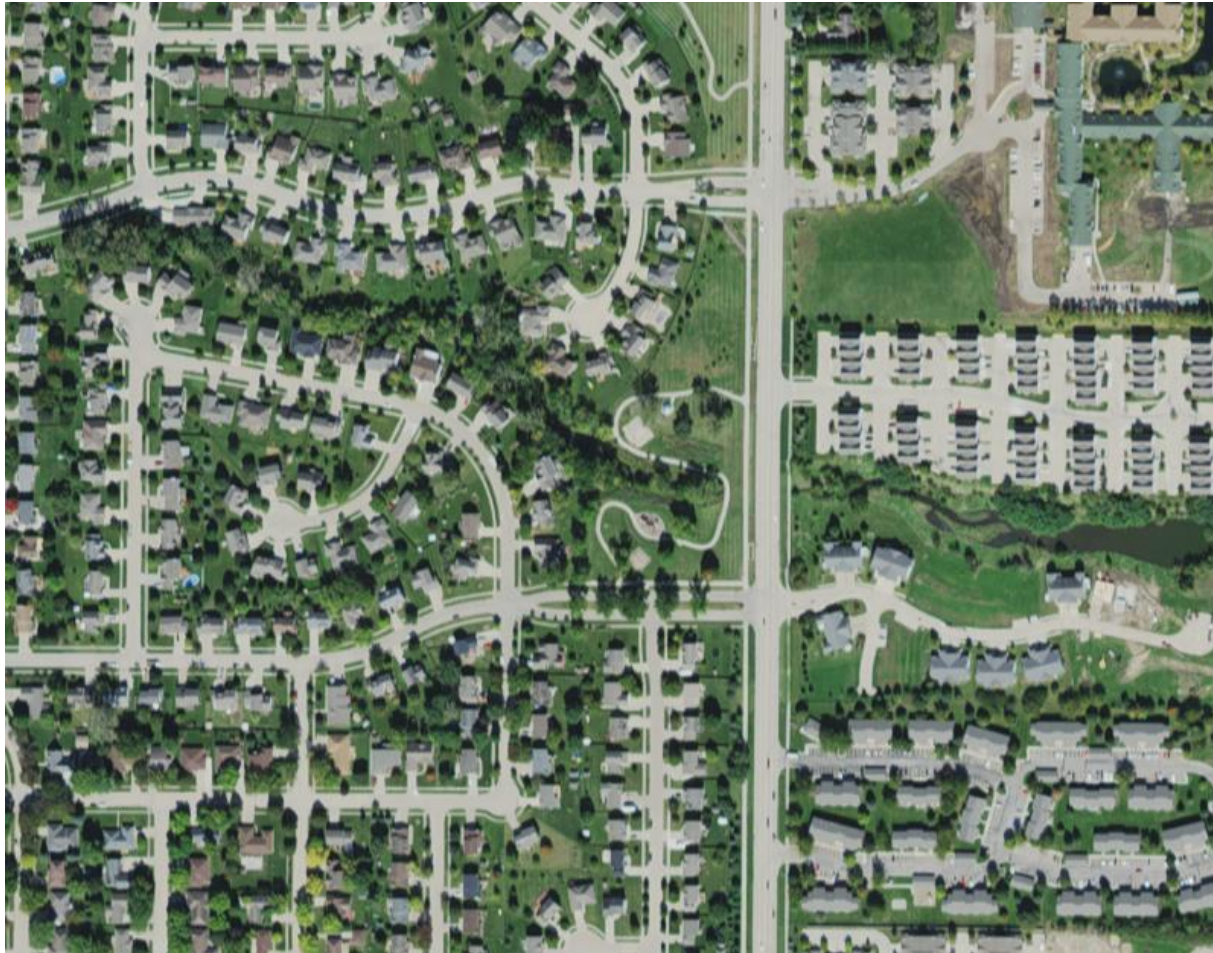


Current Conditions.





Site #4: Summerbrook Park, Ankeny



LiDAR Hillshade



FOURMILE CREEK STREAM RESTORATION

YOU ARE OVERLOOKING TRIBUTARY B OF FOURMILE CREEK.



STREAM RESTORATION

In 2011, this tributary had a stream restoration completed and a stream buffer installed. The City of Ankeny provided a cost-effective and aesthetic creek restoration utilizing several techniques. The goals of the restoration were to slow down the flow of the water by widening the channel, reduce erosion, protect and stabilize banks, protect existing trees where possible and add vegetated buffers to increase bank stability. Previously, stormwater runoff scoured the banks of the creek and washed soil into the water.

NATIVE BUFFERS

A native buffer is the zone of native grasses, shrubs, and trees that grow next to a stream. Buffers protect natural resources, provide outdoor recreation and habitat, increase public safety, and lend character to a community. The complexity and diversity of healthy stream buffers create good habitat for many species of animals and insects by providing food, shelter, and a travel corridor.



SWALLOWTAIL BUTTERFLY
IN PRAIRIE PHLOX

NATIVE PLANTS

In this area of the park, you can observe many different types of grasses and flowering native plants. This includes: lanceleaf coreopsis, pale purple coneflower, butterfly milkweed, oxeye sunflower, prairie blazing star, purple prairie clover, black-eyed susan, and rattlesnake master. These native plants will also attract many types of birds and butterflies!

Rock Toe Protection
Rock-toe protection strengthens the toe where the water level fluctuates. This keeps the stream bank from eroding away as the water elevation varies.

Benched Bank
A benched bank gives the stream access to the floodplain during higher flow conditions. The "benched" bank is the flat area just outside the normal stream channel. This allows the water to widen and slow down.

Native Seeding
Native seeding mixes are created using a mix of native seeds. These seeds will develop into plants that help hold the soil in place, reduce erosion, and improve the stream.

EVERYONE HAS WATERFRONT PROPERTY

You live on waterfront property! While you may not live directly on a stream, the waterway that flows through your property eventually ends up in one of Ankeny's streams or ponds. Because that flows down your driveway to the nearest waterway, you do have waterfront property. When the water is flowing, it's not straight into a stream or pond, but it's there.

Dogwood Live Stakes
Red-outer dogwood live stakes are a natural way to provide shore stabilization. The plants are pushed into the banks and as they establish, the roots provide a living way to hold the banks in place.

Rock Riffle Grade Control
Rock riffle grade control is used to reduce the stream slope and lower velocities. This widens and slows down the flow of water to reduce further stream degradation.

Native Trees Planted
Native trees including Autumn Blaze Maple, Black Alder, Shagbark Hickory, and American Linden were planted on both sides of the stream bank. These will help stabilize the soil and keep it from eroding away over time the ground is established.



SPIDERWORT



PRAIRIE BLAZING STAR



ROYAL CATCHFLY



BLACK-EYED SUSANS

FUNDY



2011 Original Project Work



Current Conditions



